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A background and literature search and intensive pedestrian survey was conducted for a area of approximately 300 acres. No prehistoric or historic sites were encountered. No further archeological investigations are recommended.

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Cultural Resources Survey  
of the  
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ARCHEOLOGICAL ASSESSMENTS REPORT NO. 41

Cultural Resources Survey  
of the  
St. Johns Pumping Station and Facilities  
New Madrid County, Missouri

by

W. J. Bennett, Jr.

Work Sponsored  
by  
The Department of the Army  
Memphis District, Corps of Engineers  
DACW66-83-M-1418

1983

# ABSTRACT

An intensive cultural resources survey was undertaken at the St. Johns Pumping Station and facilities project area in New Madrid County, Missouri. The project included a background and literature search as well as an intensive pedestrian examination of the approximately 300 acres of the project area. No prehistoric or historic sites were encountered. One isolated find, a single contracting point dart point, was recovered from the river bank. No further archeological investigations are recommended for the project area at this time. This work was undertaken under the authority of Purchase Order No. LACW66-83-M-1418.

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Cultural Resources Survey  
of the  
St. Johns Pumping Station and Facilities  
New Madrid County, Missouri

INTRODUCTION

Project Authorization

Under the authority of and in compliance with the National Historic Preservation Act of 1966 (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-190), Executive Order 11593 (The Protection and Enhancement of the Cultural Environment), the Archeological and Historic Preservation Act of 1974 (PL 93-291), and other authorities, the Department of the Army, Memphis District, Corps of Engineers contracted with Archeological Assessments, Inc. to perform an intensive cultural resources survey of lands in New Madrid County, Missouri, that are to be impacted by the construction of the St. Johns Pumping Station and its facilities. This work was performed under Contract Number DACW66-83-M-1418.

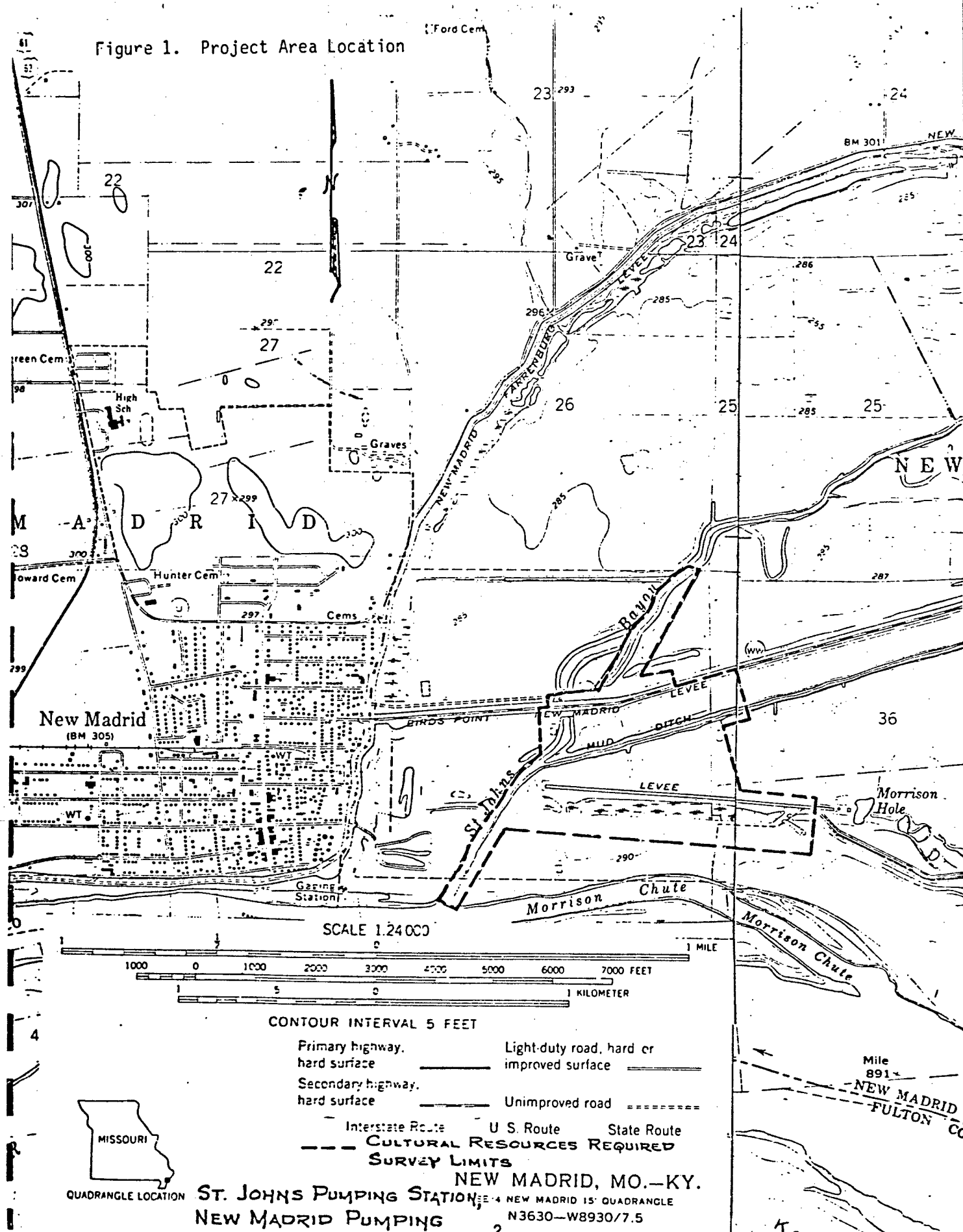
Project Area Location and Description

The project area consisted of approximately 300 acres of land located in New Madrid County, Missouri, just east of the town of New Madrid (Figure 1). The town of New Madrid lies at the edge of Sikeston Ridge while the project area lies in the southern portion of the Cairo Lowlands within the Lower Mississippi drainage basin (Figure 2).

The natural vegetation of New Madrid County contained at least 40 different kinds of trees of three forest types. The oak-hickory forest type covered the natural levees. The oak-gum-cypress forest type covered the low wet areas of swamp and an elm-ash-cotton forest type covered the rest of the county. Native prairie vegetation is no longer present in the county but grass once was present on about 1% of the county. Only about 3% of the county is presently forested and in native vegetation (Brown 1977: 67). The project area contains some acreage in crop land and some acreage in woods. At the time of the survey the crop land was planted in beans. The wooded acres were composed of rather dense stands of hardwoods including hickory, cypress and gum with heavy understory.

Because of the widespread cultivation of clean-tilled crops the number and diversity of wildlife has declined in New Madrid County. Cottontail rabbits, mourning dove, and migrating waterfowl are plentiful in some parts of the county. Mink, muskrat, and raccoon live near some water areas. A

Figure 1. Project Area Location





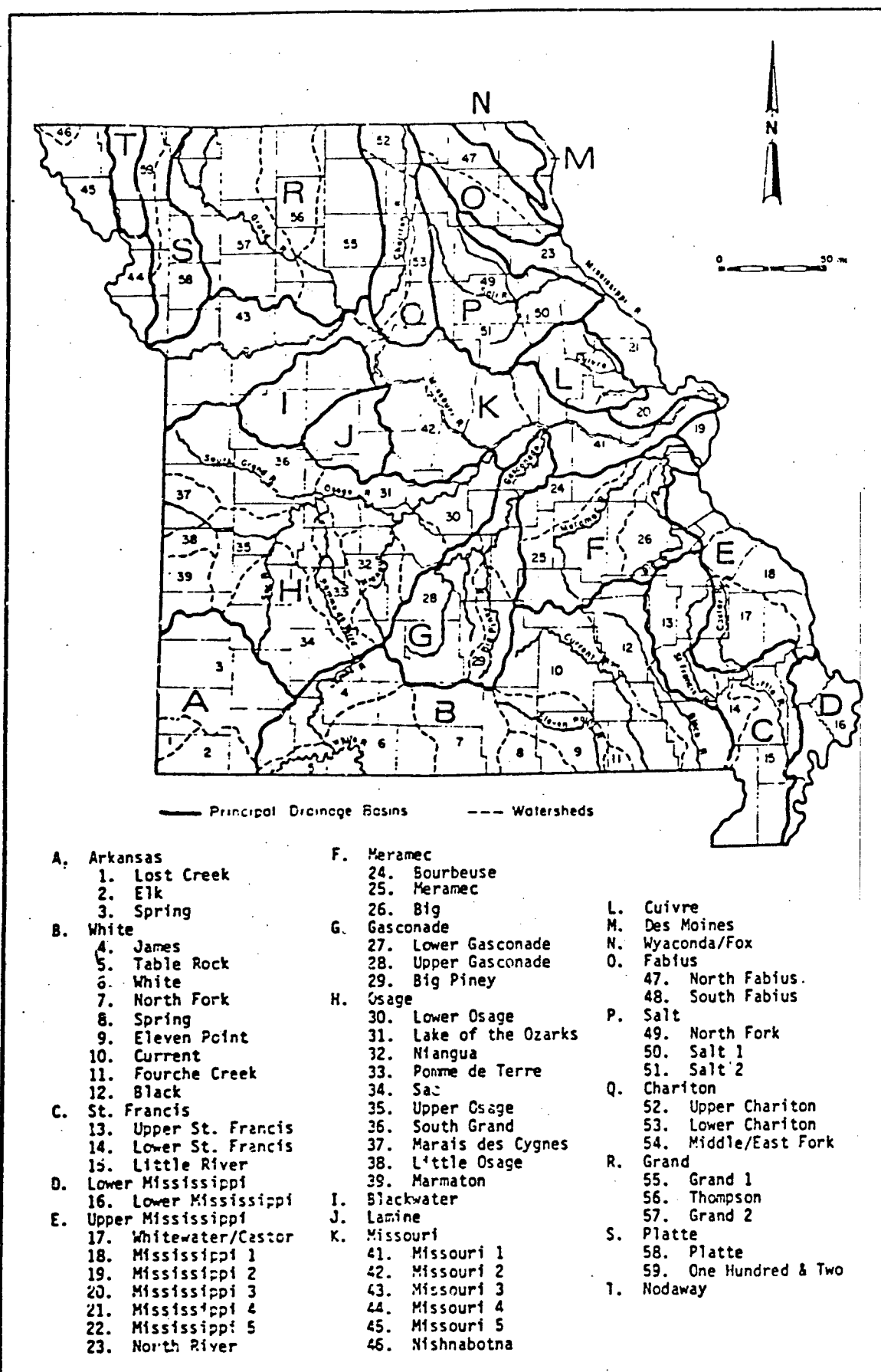


Figure 2. Watershed Map of Missouri

partially successful attempt has been made to stock and maintain wild turkey populations in some areas. White-tailed deer, wolves, foxes, swamp rabbits, bob-white quail and others that were once plentiful are now rare. Other kinds, bear and bobcat, are now absent from the area (Brown 1977: 40).

Figure 3 illustrates the physiography, relief, drainage, and surface features of New Madrid County. Within the project area the terrain was level to very slightly undulating with natural relief limited to less than 1 meter. In several places the project area had been substantially modified by the construction of levees and borrow pits.

Soils in the project area are composed primarily of Sharkey clay which is basically a backswamp soil and Commerce silty clay loam which has formed in the active floodplain of the Mississippi (Figure 4). Both areas are subjected to periodic flooding and wetness is a hazard to land use (Brown 1977).

#### Project Goals and Orientation

This project was undertaken to locate and to describe such cultural resources as may be located in the project area. Evaluation of resources beyond their basic description was not included in this effort.

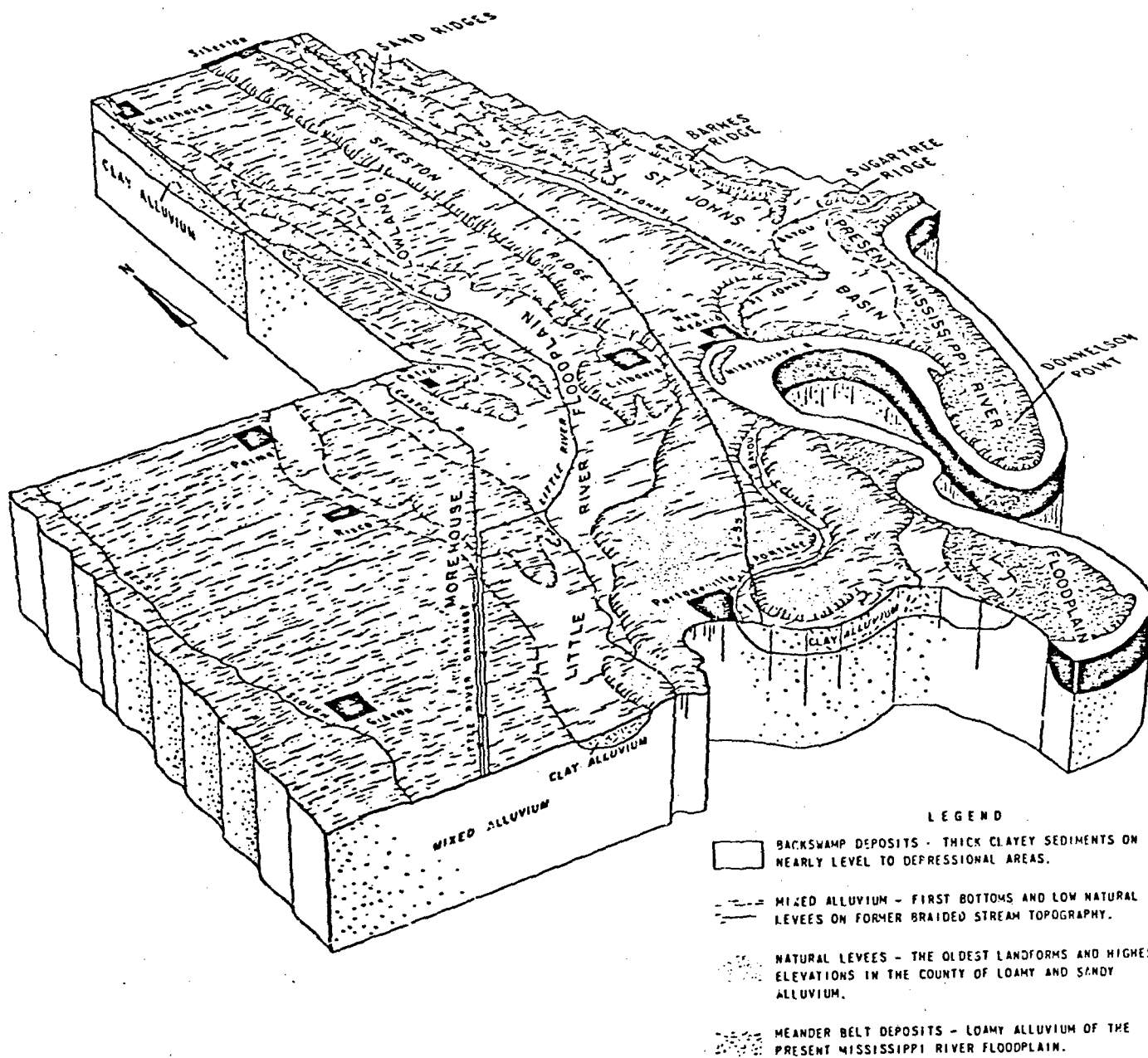


Figure 3. Physiography, relief, drainage, and surface features of New Madrid County (Map Source: Brown 1977: 65)

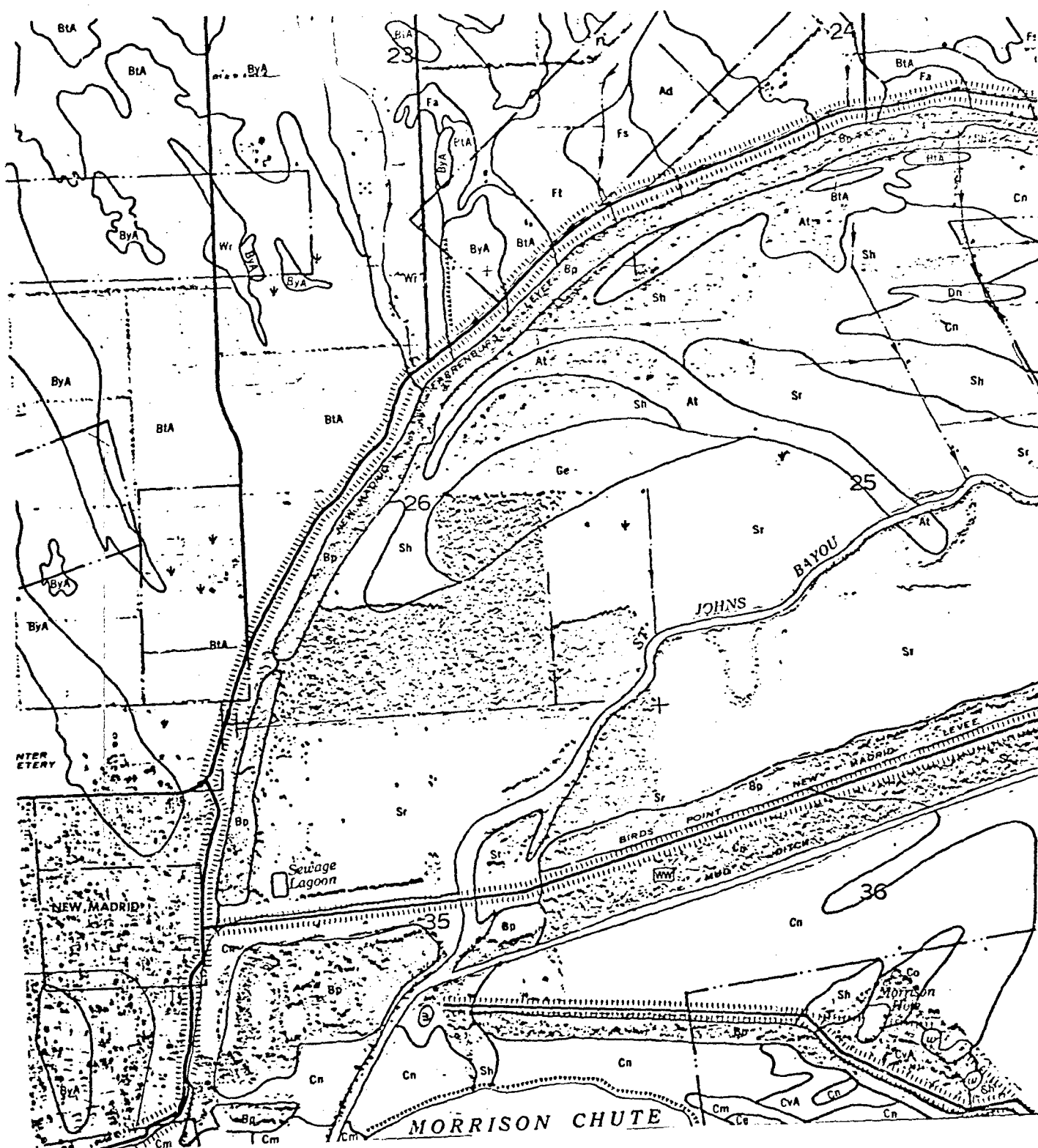


Figure 2. Soils in the Project Area. Sr=Sharkey clay, Cn=Commerce silty, clay loam, Bp=Borrow Pit. Scale 1:20,000 (Map Source: Brown 1979).

## INVESTIGATIONS

### Background Research

Sources Consulted. Prior to field work a records check was conducted at the Division of Archeology, Department of Natural Resources, Jefferson City, Missouri, to determine the presence of any previously recorded cultural resources in the project area. No cultural resources were on record for the project area at that office. The Memphis District, Corps of Engineers, also had no sites on record for the project area.

Archeological Context. While there had been no previous systematic archeological investigations in the project area the general southeast Missouri region has been subjected to intensive examination over the past several decades. In fact, the area has attracted considerable archeological antiquarian interest since the 19th Century because of its spectacular earthworks.

Several of these investigations have been conducted in New Madrid County. Among these are Adams and Walker (1942), Marshall (1965), Williams (1968), Sojberg (1976), Price (1976), Price and Harris (1978), and Nixon (1982) which apparently came very close to the project area. Perhaps the most famous investigations were the excavations conducted at the Lilbourne site just west of New Madrid (Chapman et al 1974). Regional studies include Chapman (1975, 1980), Lewis (1974, 1982), Phillips, Ford and Griffin (1951), Phillips (1970), and Williams (1954).

These investigations have determined that the same broad culture historical outline used to interpret the archeology of the eastern United States is applicable to this portion of the Central Mississippi Valley.

The earliest defined unit of human occupation is the Paleo-Indian period (? - 8,000 BC) which is not extensively documented for the region. This period was composed of highly nomadic hunting bands whose economy is thought to have focused on large game animals of the Pleistocene period, particularly mammoth and mastodon. The highly distinctive Clovis points of this period have been found in association with mastodon remains at the Kinmswick site south of St. Louis, Missouri (Graham et al 1981).

The Paleo-Indian period was followed by a very long time span characterized by hunting and gathering cultures. This Archaic period ranged from about 8,000 BC to 1,000/500 BC. The Dalton culture with its distinctive tool kit is generally considered to be the final Paleo-Indian or the earliest Archaic manifestation. The Archaic period is not well known for the area but is usually divided into three sub-stages, Early, Middle and Late. It is thought that the Middle Archaic period may have witnessed a gap in the occupation of the region followed by a period of population increase and the establishment of several sites during the Late Archaic period. This manifestation is called the O'Bryan Ridge Phase.

The Archaic period is followed by the much better defined Woodland Period (500 BC - AD 700/900). A major characteristic of this period is the presence of ceramics. Barnes ceramics are sand-tempered and Baytown ceramics are clay-tempered. Morse and Morse (1981) reports extensive excavations at the important Zebree site in northeast Arkansas which has a strong Barnes component.

In the Mississippian period (AD 700/900 - 1541) there appears a strong tribal organization with large villages. The economy was based largely on maize agriculture. This period is marked by the establishment of large fortified towns and impressive mound structures. An important example of this is the Lilbourne site just to the west of the project area. A large number of sites from this period have been documented. They are generally grouped together as the Cairo Lowland Phase (Phillips 1970: 925, 926) but recent investigators, particularly Lewis (1982), have argued for some substantial distinctions within this phase.

Technically speaking the historic period begins with the DeSoto expedition in 1541. However, European exploration did not take place on a large scale until several decades later with settlement beginning in earnest in the mid to late 18th century. The town of New Madrid, about a mile south of the present location, was planned and established in 1789 by George Moran on a land grant from the Spanish. Apparently he wished to establish some sort of independent state in the area but this proved infeasible. The Spanish established Fort Celeste at New Madrid and stationed several naval vessels there. American settlement began very shortly after the Louisiana Purchase. The fortunes of the settlers were set back by the famous earthquakes of 1812. Accounts of the settlement in 1819 and 1820 indicated only a small settlement was still there (Nixon 1982: 136). Civil War battles and engagements were fought in the area with the taking of Island 10 by the Federal troops interpreted as a major Federal success.

### Field Work

Field investigations were conducted from July 30 - August 2, 1983, by W. J. Bennett, Jr., Robert Bennett, and John Miller. Field strategy involved walking the project area at transects set approximately 20/25 m apart and placing shovel tests at 20/25 m intervals in areas where the ground visibility was less than 20%.

The project area was divided into 4 survey units which are described below. Survey Unit 1 was composed of the area east of St. Johns Bayou, north of the Birds Point-New Madrid Levee. Along the levee the area had been completely re-worked by the construction of the levee and its borrow pit. The area paralleling St. Johns Bayou was heavily vegetated with large stands of hardwoods. The soil was Sharkey clay and was cracked and cloddy. Shovel tests indicated a recent deposition of silt and clay of about 3 - 5 cm deep.

This covered almost all of the area and had buried most of the leaf and duff debris in the area. Six transects, oriented parallel to St Johns Bayou, were walked. No cultural resources other than recent trash were encountered.

Survey Unit 2 was a similar tract south of the Birds Point-New Madrid levee and north of Mud Ditch. As in Survey Unit 1 a layer of clay and silt had been recently deposited over most of the wooded area. Soil profiles indicate a thick layer of dark, black clay to 30 cm. Some beans had been planted in the borrow areas. Six east-west oriented transects were walked in this unit. No cultural materials, other than recent trash, were encountered.

Survey Unit 3 was between Mud Ditch on the north and a levee to the south. This area had some small patches of trees along a drainage ditch. Otherwise it was in beans. The beans were about 5 - 15 cm high and the visibility in the field was excellent. About 4 slight rises were noted in the field. These were all examined for cultural resources. Otherwise the field was walked in 9 transects oriented parallel to Mud Ditch. No cultural materials were encountered.

Survey Unit 4 lay between the southern most levee and Morrison Chute. It was bounded on the west by St. Johns Bayou. The levee and associated borrow pit made up a large portion of this area. South of the borrow pit the field was in young beans similar to Unit 3. Visibility was excellent. Three transects were walked over this Unit. The few slight rises were also examined. One item of cultural debris was located in this area. This consisted of a single, contracting stem dart point. This was located in the river bank at the confluence of St. Johns Bayou and Morrison Chute. The point was about 15 feet down the bank lying exposed on a clay layer. It is our judgement that the point was displaced. Extensive examination of the adjacent river bank revealed no other cultural materials or features. However, the bank profile did indicate that this landform contained numerous buried and re-worked features which is expected in this dynamic environment.

## RESULTS

The intensive survey of the project area discovered 1 isolated find which we judge to be displaced (Figure 5). The isolated find is a chert dart point with a contracting stem. No other historic or prehistoric cultural materials, other than recent trash, were encountered. Much of the project area has already been disturbed and much of the area is in backswamp. A portion of the project area, Survey Unit 4, and possibly Survey Unit 3, has been subjected to a variety of modifications due to river activity.

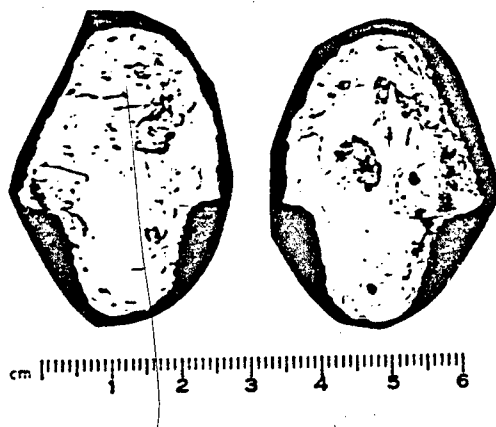


Figure 5. Isolated Dart Point



### RECOMMENDATIONS

It is our judgement that the project area does not contain cultural resources which can be located by the use of normal cultural resource survey methods. The discovery of the isolated point in the river bank suggests that cultural resources do exist somewhere in the vicinity and it may be possible that sites are buried within the project area. Survey Unit 4 is a good candidate for the presence of buried sites.

The survey methodology used does not eliminate the possibility of encountering deeply buried sites. Therefore, it is recommended that any site encountered during construction be protected from further damage, by stopping construction, until its importance can be determined by the Environmental Resources Branch, Memphis District, U. S. Army Corps of Engineers in conjunction with the Division of Archeology, Department of Natural Resources, Jefferson City, Missouri.

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## APPENDIX I -- Scope of Work

### SECTION C - DESCRIPTION/SPECIFICATIONS

#### SCOPE OF WORK

Archeological Intensive Survey (Without Testing) of St. Johns and New Madrid Pumping Stations, and Levee Closure and Gravity Outlet, New Madrid County, Missouri

#### C-1. GENERAL.

C-1.1. The Contractor shall conduct a background and literature search and intensive survey level investigation of St. Johns and New Madrid, New Madrid County, Missouri. These tasks are in partial fulfillment of the Memphis District's obligations under the National Historic Preservation Act of 1966 (P.L. 89-665); the National Environment Policy Act of 1969 (P.L. 91-190); Executive Order 11593, "Protection and Enhancement of Cultural Environment," 13 May 1971 (360FR3921); Preservation of Historic and Archeological Data, 1974 (P.L. 93-291); and the Advisory Council on Historic Preservation, "Procedures for the Protection of Historic and Cultural Properties" (36 CFR 8, Part 800).

#### C-1.2. Personnel Standards.

a. The Contractor shall utilize a systematic, interdisciplinary approach to conducting the study. Specialized knowledge and skills will be used during the course of the study to include expertise in archaeology, history, architecture, geology and other disciplines as required. Techniques and methodologies used for the study shall be representative of the state of current professional knowledge and development.

b. The following minimal experiential and academic standards shall apply to personnel involved in cultural resources investigations described in this Scope of Work:

(1) Archeological Project Directors or Principal Investigators (PI). Individuals in charge of an archeological project or research investigation purchase order, in addition to meeting the appropriate standards for archaeologist, must have a publication record that demonstrates extensive experience in successful field project formulation, execution and technical monograph reporting. The Contracting Officer may also require suitable professional references to obtain estimates regarding the adequacy of prior work.

(2) Archaeologist. The minimum formal qualifications for individuals practicing archaeology as a profession are a B.A. or B.S. degree from an accredited college or university, followed by a minimum of two years of successful graduate study with concentration in anthropology and specialization in archeology and at least two summer field schools or their equivalent under the supervision of archeologists of recognized competence. A Master's thesis or its equivalent in research and publication is highly recommended, as is the M.A. degree.

(3) Other Professional Personnel. All non-archeological personnel utilized for their special knowledge and expertise must have a B.A. or B.S. degree from an accredited college or university, followed by a minimum of one year of successful graduate study with concentration in appropriate study.

(4) Other Supervisory Personnel. Persons in any archeological supervisory position must hold a B.A., B.S. or M. A. degree with a concentration in archeology and a minimum of 2 years of field and laboratory experience

(5) Crew Members and Lab Workers. All crew members and lab workers must have prior experience compatible with the tasks to be performed under this purchase order. An academic background in archeology/anthropology is highly recommended.

c. All operations shall be conducted under the supervision of qualified professionals in the discipline appropriate to the data that is to be discovered, described or analyzed. Vitae of personnel involved in project activities may be required by the Contracting Officer at anytime during the period of service of this purchase order.

C-1.3. The Contractor shall designate in writing the name of the Principal Investigator. Participation time of the Principal Investigator shall average a minimum of 50 hours per month during the period of service of this purchase order. In the event of controversy or court challenge, the Principal Investigator shall be available to testify with respect to report findings. The additional services and expenses would be at Government expense, per paragraph C-1.9 below.

C-1.4. The Contractor shall keep standard field records which will include, but are not limited to, field notebooks, state approved site forms (prehistoric, historic, architectural), field data forms and graphics and photographs. Publishable quality site maps with precise boundaries and proposed impact boundaries will be submitted for each site.

C-1.5. To conduct the field investigation, the Contractor will obtain all necessary permits, licenses, and approvals from all local, state and Federal authorities. Should it become necessary in the performance of the work and services of the Contractor to secure the right of ingress and egress to perform any of the work required herein on properties not owned or controlled by the Government, the Contractor shall secure the consent of the owner, his representative, or agent, prior to effecting entry on such property.

C-1.6. Innovative approaches to data location, collection, description and analysis, consistent with other provisions of this purchase order and the Cultural Resources requirements of the Memphis District, are encouraged. Such approaches will require prior consultation with the Contracting Officer and/or his authorized representative.

C-1.7. No mechanical power equipment shall be utilized in any cultural resource activity without specific written permission of the Contracting Officer.

C-1.8. Techniques and methodologies used during the survey shall be representative of the current state of knowledge for their respective disciplines.

C-1.9. The Contractor shall furnish expert personnel to attend conferences and furnish testimony in any judicial proceedings involving the archaeological and historical study, evaluation, analysis and report. When required, arrangements for these services and payment therefor will be made by representatives of either the Corps of Engineers or the Department of Justice.

C-1.10. The Contractor shall supply such graphic aids (ex: profile and plan drawings) or tables as are necessary to provide a ready and clear understanding of spatial relationships or other data discussed in the text of the report. Such tables or figures shall appear as appropriate in the body of the report.

C-1.11. The Contractor, prior to the acceptance of the final report, shall not release any sketch, photograph, report or other material of any nature obtained or prepared under this purchase order without specific written approval of the Contracting Officer.

C-1.12. The extent and character of the work to be accomplished by the Contractor shall be subject to the general supervision, direction, control and approval of the Contracting Officer. The Contracting Officer may have a representative of the Government present during any or all phases of the described cultural resource project.

## C-2. STUDY AREA.

C-2.1. The St. Johns and New Madrid project is located in New Madrid County, Missouri. The project right-of-way will vary in width from 100 feet (30.48 meters) to 800 feet (243.84 meters) and will be on one side only in some areas and on both sides in other areas. Vegetative clearing will be required in some areas.

See attached blueines and maps for exact location of work area.

C-2.2. Upon receipt of a Notice to Proceed, the Contractor shall organize his work forces and assign such personnel to the work as is necessary to complete the assignment in accordance with the time requirement.

## C-3. DEFINITIONS.

C-3.1. "Cultural resources" are defined to include any buildings, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

C-3.2. "Background and Literature Search" is defined as a comprehensive examination of existing literature and records for the purpose of inferring the potential presence and character of cultural resources in the study area.

The examination may also serve as collateral information to field data in evaluating the eligibility of cultural resources for inclusion in the National Register of Historic Places or in ameliorating losses of significant data in such resources.

C-3.3. "Intensive Survey" is defined as a comprehensive, systematic, and detailed on-the-ground survey of an area, of sufficient intensity to determine the number, types, extent and distribution of cultural resources present and their relationship to project features.

C-3.4. "Mitigation" is defined as the amelioration of losses of significant prehistoric, historic, or architectural resources which will be accomplished through preplanned actions to avoid, preserve, protect, or minimize adverse effect upon such resources or to recover a representative sample of the data they contain by implementation of scientific research and other professional techniques and procedures. Mitigation of losses of cultural resources includes, but is not limited to, such measures as: (1) recovery and preservation of an adequate sample of archaeological data to allow for analysis and published interpretation of the cultural and environmental conditions prevailing at the time(s) the area was utilized by man; (2) recording, through architectural quality photographs and/or measured drawings of buildings, structures, districts, sites and objects and deposition of such documentation in the Library of Congress as a part of the National Architectural and Engineering Record; (3) relocation of buildings, structures and objects; (4) modification of plans or authorized projects to provide for preservation of resources in place; (5) reduction or elimination of impacts by engineering solutions to avoid mechanical effects of wave wash, scour, sedimentation and related processes and the effects of saturation.

C-3.5. "Reconnaissance" is defined as an on-the-ground examination of selected portions of the study area, and related analysis adequate to assess the general nature of resources in the overall study area and the probable impact on resources of alternate plans under consideration. Normally reconnaissance will involve the intensive examination of not more than 15 percent of the total proposed impact area.

C-3.6. "Significance" is attributable to those cultural resources of historical, architectural, or archaeological value when such properties are included in or have been determined by the Secretary of the Interior to be eligible for inclusion in the National Register of Historic Places after evaluation against the criteria contained in How to Complete National Register Forms.

C-3.7. "Testing" is defined as the systematic removal of the scientific, prehistoric, historic, and/or archaeological data that provide an archeological or architectural property with its research or data value. Testing may include controlled surface survey, shovel testing, profiling, and

limited subsurface test excavations of the properties to be affected for purposes of research planning, the development of specific plans for research activities, excavation, the development of specific plans for research activities, preparation of notes and records, and other forms of physical removal of data and the material analysis of such data and material, preparation of reports on such data and material and dissemination of reports and other products of the research. Subsurface testing shall not proceed to the level of mitigation.

C-3.8. "Analysis" is the systematic examination of material data, environmental data, ethnographic data, written records, or other data which may be prerequisite to adequately evaluating those qualities of cultural loci which contribute to their significance.

#### C-4. GENERAL PERFORMANCE SPECIFICATIONS.

C-4.1. The Contractor shall prepare a draft and final report detailing the results of the study and their recommendations.

##### C-4.2. Background and Literature Search.

a. This task shall include an examination of the historic and prehistoric environmental setting and cultural background of the study area and shall be of sufficient magnitude to achieve a detailed understanding of the overall cultural and environmental context of the study area. It is axiomatic that the background and literature search shall normally precede the initiation of all fieldwork.

b. Information and data for the literature search shall be obtained, as appropriate, from the following sources: (1) Scholarly reports - books, journals, theses, dissertations and unpublished papers; (2) Official Records - Federal, state, county and local levels, property deeds, public works and other regulatory department records and maps; (3) Libraries and Museums - both regional and local libraries, historical societies, universities, and museums; (4) Other repositories - such as private collections, papers, photographs, etc.; (5) archeological site files at local universities, the State Historic Preservation Office, the State Archeologist; (6) Consultation with qualified professionals familiar with the cultural resources in the area, as well as consultation with professionals in associated areas such as history, sedimentology, geomorphology, agronomy, and ethnology.

c. The Contractor shall include as an appendix to the draft and final report written evidence of all consultation and any subsequent response(s), including the dates of such consultation and communications.



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boundaries as well as to a permanent reference point (in terms of azimuth and distance). If possible, the permanent reference point used shall appear on Government blueline (project) drawings and/or 7.5 minute U.S.G.S. quad maps. If no permanent landmark is available, a permanent datum shall be established in a secure location for use as a reference point. The permanent datum shall be precisely plotted and shown on U.S.G.S. quad maps and project drawings. All descriptions of site location shall refer to the location of the primary site datum.

d. The Contractor shall examine all cultural resources encountered in the intensive survey sufficiently well to determine the approximate size, general nature and quantity of architectural or site surface data. Data collection shall be of sufficient scope to provide information requested on state site forms.

e. During the course of the intensive survey, the Contractor should observe and record local environmental, physiographic, geological or other variables (including estimates of ground visibility and descriptions of soil characteristics) which may be useful in evaluating the effectiveness of survey procedures and providing comparative data for use in predictive statements which may be utilized in future Government cultural resource investigations.

f. When sites are not wholly contained within the right-of-way limits, the Contractor shall survey an area outside the right-of-way limits large enough to include the entire site within the survey area. This shall be done in an effort to delineate site boundaries and to determine the degree to which the site will be impacted.

g. Site Specific Investigations. All cultural resources discovered within surveys areas shall be examined by methods consistent with the following requirements:

(1) Site Boundaries

Horizontal site boundaries shall be derived by the use of surface observation procedures (where surface conditions are highly conducive to the observation of cultural evidence) or by screened shovel cut units or by a combination of these methods. The delineations of horizontal sites boundaries may be accomplished concurrently with the collection of other data consistent with paragraph C-4.3g.(2). Site boundaries shall be related to a site datum and permanent reference point as described in paragraph C-4.3c.

(2) Surface Data Retrieval

Surface collection of the site area shall be accomplished in order to obtain data representative of total site surface content. Both historic and prehistoric items shall be collected. The Contractor shall carefully note and record descriptions of surface conditions of the site including ground cover

and the suitability of soil surfaces for detecting cultural items (ex: recent rainfall, standing water or mud). If ground surfaces are not highly conducive to surface collection, screened shovel test units shall be used to augment surface collection procedures.

Care should be taken to avoid bias in collecting certain classes of data or artifact types to the exclusion of others (ex: debitage or faunal remains) so as to insure that collections accurately reflect both the full range and the relative proportions of data classes present (ex: the proportion of debitage to implements or types of implements to each other). Such a collecting strategy shall require the total collection of quadrat or other sample units in sufficient quantities to reasonably assure that sample data are representative of such discrete site subareas as may exist. Since the number and placement of such sample units will depend, in part, on the subjective evaluation of intrasite variability, and the amount of ground cover, the Contractor shall describe, in the reconnaissance report, the rationale for the number and distribution of collection units. In the event that the Contractor utilizes systematic sampling procedures in obtaining representative surface samples, care should be taken to avoid periodicity in recovered data. No individual sample unit type used in surface data collection shall exceed 36 square meters in area.

The Contractor shall undertake (in addition and subsequent to sample surface collecting) a general site collection in order to increase the sample size of certain classes of data which the Principal Investigator may deem prerequisite to an adequate site-specific and intersite evaluation of data.

C-4.4. Analysis and Curation. Unless otherwise indicated, artifactual and non-artifactual analysis shall be of an adequate level and nature to fulfill the requirements of this Scope of Work. All recovered cultural items shall be cataloged in a manner consistent with state requirements or standards of curation in the state in which the study occurs. The Contractor shall consult with appropriate state officials as soon as possible following the conclusion of fieldwork in order to obtain information (ex: accession numbers) prerequisite to such cataloging procedures. The Contractor shall have access to a depository for notes, photographs and artifacts (preferably in the state in which the study occurs) where they can be permanently available for study by qualified scholars. If such materials are not in Federal ownership, applicable state laws, if any, should be followed concerning the disposition of the materials after the completion of the final report. Efforts to insure the permanent curation of properly cataloged cultural resources materials in an appropriate institution shall be considered an integral part of the requirements of this Scope of Work.

#### C-5. GENERAL REPORT REQUIREMENTS.

C-5.1. The primary purpose of the cultural resources report is to serve as a planning tool which aids the Government in meeting its obligations to preserve

and protect our cultural heritage. The report will be in the form of a comprehensive, scholarly document that not only fulfills mandated legal requirements but also serves as a scientific reference for future cultural resources studies. As such, the report's content must be not only descriptive but also analytic in nature.

C-5.2. Upon completion of all field investigations and research, the Contractor shall prepare a report detailing the work accomplished, the results, and the recommendations. The format suggested by Guidelines for Contract Cultural Resource Survey Reports and Professional Qualifications as prepared by the Missouri Department of Natural Resources should be reviewed and, to the extent allowed by this Scope of Work utilized as an aid in preparing the required report.

C-5.3. The report shall include, but not necessarily be limited to, the following sections and items:

a. Title Page. The title page should provide the following information; the type of task undertaken, the cultural resources which were assessed (archeological, historical, architectural); the project name and location (county and state), the date of the report; the Contractor's name; the purchase order number; the name of the author(s) and/or the Principal Investigator; and the agency for which the report is being prepared.

b. Abstract. The abstract should include a summary of the number and types of resources which were surveyed, results of activities and the recommendations of the Principal Investigator.

c. Table of Contents.

d. Introduction. This section shall include the purpose of the report; a description of the proposed project; a map of the general area; a project map; and the dates during which the task was conducted. The introduction shall also contain the name of the institution where recovered materials will be curated.

e. Environmental Context. This section shall contain, but not be limited to, a discussion of probable past floral and faunal characteristics of the project area. Since data in this section may be used in the future evaluation of specific cultural resource significance, it is imperative that the quantity and quality of environmental data be sufficient to allow subsequent detailed analysis of the relationship between past cultural activities and environmental variables.

f. Previous Research. This section shall describe previous research which may be useful in deriving or interpreting relevant background research data, problem domains, or research questions and in providing a context in which to examine the probability of occurrence and significance of cultural resources in the study area.

g. Literature Search and Personal Interviews. This section shall discuss the results of the literature search, including specific data sources, and personal interviews which were conducted during the course of investigations.

h. Survey, Testing and Analytical Methods. This section shall contain an explicit discussion of research and/or survey strategy, and should demonstrate how environmental data, previous research data, the literature search and personal interviews have been utilized in constructing such a strategy.

i. Survey, Testing and Analytical Results. This section shall discuss archeological, architectural, and historical resources surveyed, tested and analyzed; the nature and results of analysis, and the scientific importance or significance of the work. Quantified listings and descriptions of artifacts and their proveniences may be included in this section or added to the report as an appendix. Inventoried sites shall include a site number.

j. Conclusions and Recommendations. This section shall contain the recommendations of the Principal Investigator regarding all purchase order activities. Recommendations in regard to survey level investigations at this project should be at a level sufficient to accomplish the objectives described in paragraph C-4.3. Conclusions derived from survey activities concerning the nature, quantity and distribution of cultural loci, should be used in describing the probable impact of project work on cultural resources.

k. References (American Antiquity style).

1. Appendices (Maps, correspondence, etc.). A copy of this Scope of Work shall be included as an appendix in all reports.

C-5.4. The above items do not necessarily have to be discrete sections; however, they should be readily discernable to the reader. The detail of the above items may vary somewhat with the purpose and nature of the study.

C-5.5. In order to prevent potential damage to cultural resources, no information shall appear in the body of the report which would reveal precise resource location. All maps which indicate or imply precise site locations shall be included in reports as a readily removable appendix (ex: envelope).

C-5.6. No logo or other such organizational designation shall appear in any part of the report (including tables or figures) other than the title page.

C-5.7. Unless specifically authorized by the Contracting Officer, all reports shall utilize permanent site numbers assigned by the state in which the study occurs.

C-5.8. All appropriate information (including typologies and other classificatory units) not generated in these purchase order activities shall be suitably referenced.

C-5.9. Reports detailing testing activities shall contain site specific maps. Site maps shall indicate site datum(s), location of data collection units (including shovel cuts, subsurface test units and surface collection units); site boundaries in relation to proposed project activities, site grid systems (where appropriate) and such other items as the Contractor may deem appropriate to the purposes of this purchase order.

C-5.10. Information shall be presented in textual, tabular, and graphic forms, whichever are most appropriate, effective and advantageous to communicate necessary information. All tables, figures and maps appearing in the report shall be of publishable quality.

C-5.11. Any abbreviated phrases used in the text shall be spelled out when the phrase first occurs in the text. For example use "State Historic Preservation Officer (SHPO)" in the initial reference and thereafter "SHPO" may be used.

C-5.12. The first time the common name of a biological species is used it should be followed by the scientific name.

C-5.13. In addition to street addresses or property names, sites shall be located on the Universal Transverse Mercator (UTM) grid.

C-5.14. All measurements should be metric. If the Contractor's equipment is in the English system, then the metric equivalents should follow in parentheses.

C-5.15. As appropriate, diagnostic and/or unique artifacts, cultural resources or their contexts shall be shown by drawings or photographs.

C-5.16. Black and white photographs are preferred except when color changes are important for understanding the data being presented. No instant type photographs may be used.

C-5.17. Negatives of all black and white photographs and/or color slides of all plates included in the final report shall be submitted so that copies for distribution can be made.

#### C-6. SUBMITTALS.

C-6.1. The Contractor shall, unless delayed due to causes beyond his fault or negligence, complete all work and services under the purchase order within the following time limitations after receipt of notice to proceed.

a. Six (6) copies of the draft report will be submitted within 35 calendar days following notice to proceed.

b. The Government shall review the draft report and provide comments to the Contractor within 30 calendar days after receipt of the draft report.

c. An original and 20 bound copies of the final report shall be submitted within 30 calendar days following the Contractor's receipt of the Government's comments on the draft report.

C-6.2. If the Government review exceeds 30 calendar days, the period of service of the purchase order shall be extended on a day-by-day basis equal to any additional time required by the Government for review.

C-6.3. The Contractor shall submit under separate cover 6 copies of appropriate 15' quadrangle maps (7.5' when available) and other site drawings which show exact boundaries of all cultural resources within the project area and their relationship to project features, and single copies of all forms, records and photographs described in paragraph C-1.4.

C-6.4. The Contractor shall submit to the Contracting Officer completed National Register forms including photographs, maps, and drawings in accordance with the National Register Program if any sites inventoried during the survey are found to meet the criteria of eligibility for nomination and for determination of significance. The completed National Register forms are to be submitted with the final report.

C-6.5. At any time during the period of service of this purchase order, upon the written request of the Contracting Officer, the Contractor shall submit, within 30 calendar days, any portion or all field records described in paragraph C-1.4 without additional cost to the Government.

C-6.6. When cultural resources are located during intensive survey activities, the Contractor shall supply the appropriate State Historic Preservation Office with completed site forms, survey report summary sheets, maps or other forms as appropriate. Blank forms may be obtained from the State Historic Preservation Office. Copies of such completed forms and maps shall be submitted to the Contracting Officer within 30 calendar days of the end of fieldwork.

C-6.7. The Contractor shall prepare and submit with the final report, a site card for each identified resource or aggregate resource. These site cards do not replace state approved prehistoric, historic, or architectural forms or Contractor designed forms. This site card shall contain the following information, to the degrees permitted by the type of study authorized:

a. site number

b. site name

c. location: section, township, and UTM coordinates (for procedures in determining UTM coordinates, refer to How to Complete National Register Forms, National Register Program, Volume 2.

- d. county and state
- e. quad maps
- f. date of record
- g. description of site
- h. condition of site
- i. test excavation results
- j. typical artifacts
- k. chronological position (if known)
- l. relation to project
- m. previous studies and present purchase order number
- n. additional remarks

The information shall be typed on 5 X 8 inch color coded cards. White cards shall be used for archeological sites, blue cards for historical sites, green cards for architectural sites and yellow cards for sites eligible for or placed on the National Register of Historical Places.

#### C-7. SCHEDULE.

C-7.1. The Contractor shall, unless delayed due to causes beyond his control and without his fault or negligence, complete all work and services under this purchase order within the following time limitations.

<u>Activity</u>	<u>Due Date</u> (Beginning with acknowledged date of receipt Notice to Proceed)
Intensive Survey begins	3 calendar days
Submit draft report	38 calendar days
Complete Government review of draft report	68 calendar days
Contractor's Submittal of Final Report	98 calendar days



C-7.2. The Contractor shall make any required corrections after review by the Contracting Officer of the reports. In the event that any of the Government review periods are exceeded and upon request of the Contractor, the purchase order period will be extended on a calendar day for day basis. Such extension shall be granted at no additional cost to the Government.

C-8. PERIOD OF SERVICE.

C-8.1. The Contractor shall, unless delayed due to causes beyond his control and without his fault or negligence, complete all work and services under this purchase order by the dates specified.

C-8.2. If the Contractor's work is found to be unsatisfactory and if it is determined that fault or negligence on the part of the Contractor or his employees has caused the unsatisfactory condition, the Contractor will be liable for all costs in connection with correcting the unsatisfactory work. The work may be performed by Government forces or Contractor forces at the direction of the Contracting Officer. In any event, the Contractor will be held responsible for all costs required for correction of the unsatisfactory work, including payments for services, automotive expenses, equipment rental, supervision, and any other costs in connection therewith, where such unsatisfactory work as deemed by the Contracting Officer to be the result of carelessness, incompetent performance or negligence by the Contractor's employees. The Contractor will not be held liable for any work or type of work not covered by this purchase order.

C-8.3. Prior to settlement upon termination of the purchase order, and as a condition precedent thereto, the Contractor shall execute and deliver to the Contracting Officer a release of all claims against the Government arising under or by virtue of the purchase order, other than such claims, if any, as may be specifically excepted by the Contractor from the operation of the release in stated amounts to be set forth therein.

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